

	CNC and Conventional Machining Services Scope of Work	Turbo Gen Services
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Services Scope of Work

Alternative Reference

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Area of Applicability: **Eskom Rotek Industries SOC
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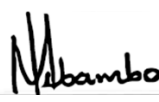
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1. Purpose

The purpose of this Scope of Work is to define the requirements for the provision of deep hole drilling and final machining services in support of Eskom Generation maintenance activities. These services are required to support planned outages, interim outages, statutory inspections, emergent breakdowns, and unplanned maintenance across the Generation fleet, including Hendrina, Kusile and Medupi Power Stations.

2. Scope of Work

The service provider shall supply specialised machining services, including but not limited to the following:

2.1 Deep Hole Drilling

Deep hole drilling services shall include:

- Drilling of precision holes with high length-to-diameter ratios
- Gun drilling, BTA, or equivalent deep hole drilling methods
- Drilling carbon steel, alloy steel, stainless steel, non-ferrous and high-temperature materials
- Drilling of components such as:
 - Turbine casing studs and bolts
 - Valve bodies and steam chests
 - Thermowells
 - Flanges
 - Nozzles and pressure parts
 - Achieving specified tolerances, concentricity, straightness, and surface finish
 - Drilling to OEM-specified dimensions and drawings

2.2 Final Machining of Components

Final machining shall include all operations required to restore components to serviceable condition, including:

- Final boring, reaming, and honing
- Turning, milling, facing, grinding and profiling

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- Thread cutting and thread restoration
- Surface finishing to OEM requirements
- Dimensional verification and final fit-up readiness
- Machining to restore worn, damaged, or modified components

Final machining shall ensure components are fully compliant with Eskom and OEM technical specifications and are ready for installation.

3. Materials and Consumables

- The service provider shall supply all machining consumables, tooling, cutting fluids, and fixtures required to execute the work.
- Where Eskom Rotek Industries supplies customer-owned materials or components, the service provider shall ensure proper handling, traceability, and protection against damage.

4. Technical and Quality Requirements

The service provider shall:

- Comply with Eskom Rotek Industries quality standards and applicable ISO requirements
- Maintain a documented Quality Management System (QMS)
- Perform dimensional inspections and provide measurement reports
- Ensure workmanship meets OEM specifications and tolerances
- Rectify non-conforming work at no additional cost

5. Documentation and Certification

The service provider shall provide the following documentation with each completed job:

- Job card / task order reference
- Dimensional inspection and measurement reports
- Material traceability records (where applicable)
- Certificates of compliance (CoC)
- OEM compliance confirmation where required

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6. Skills and Competency Confirmation

All personnel performing machining operations shall be **qualified, competent, and authorized** by Matla Works management.

6.1 Machinist Qualification

- Machinists must hold **recognized trade qualifications** (e.g., Red Seal or equivalent).
- Operators must demonstrate practical competency on relevant machines (CNC lathe, milling machine, conventional lathe).
- Competency assessments to be conducted and records kept for audit purposes.

6.2 Training and Certification

- Personnel must have completed **machine safety and operational training**.
- Only trained and authorized personnel may operate CNC and conventional machines.
- Training records must be retained by the Service Provider.

6.3 Skills Matrix

A current **Skills and Competency Matrix** must be maintained for all machinists, listing:

- Machine types qualified for use
- Material groups experienced with (e.g., carbon steel, stainless steel, 21CrMo)
- Date of last competency assessment

6.4 Supervisory Oversight

- All machining work to be supervised by a qualified **Workshop Foreman or Engineering Technician**.
- Supervisors must verify skill suitability before assigning critical machining task.

7. Health, Safety, and Environmental (HSE) Requirements

- All machining activities to comply with the **Occupational Health and Safety Act (Act 85 of 1993)** and Eskom Rotek Industries SHEQ standards.

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- Mandatory use of **PPE** (safety boots, eye protection, hearing protection, gloves, etc.).
- **Risk Assessments (HIRA/JSA)** must be completed before machining.
- Safe handling and disposal of swarf, lubricants, and cleaning materials as per Matla Workshop environmental guidelines.

8. Responsibilities

MWS Responsibilities:

- Provide competent machinists, calibrated equipment, and adequate supervision.
- Ensure compliance with drawings, specifications, and quality procedures.
- Maintain traceability of jobs and inspection records.

Client (Eskom Generation):

- Supply approved drawings, specifications, and acceptance criteria.
- Provide raw materials if applicable.
- Participate in inspections and acceptance processes as required

9. Schedule and Delivery

- Breakdown work to be prioritized for plant continuity.
- Completed items to be packaged, tagged, and accompanied by inspection documentation.
- The service provider shall support both planned and unplanned work.
- Turnaround times shall be agreed per task order and aligned to outage schedules.

10. Acceptance Criteria

- All parts to conform to dimensional, surface finish, and material requirements.
- Supporting documentation to be complete and accurate.
- Final acceptance to be confirmed by client representative (Eskom QA or Engineer).

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11. Commercial and Contract Arrangements

- Work shall be executed on an as-and-when required basis.
- All work must be supported by an approved task order.
- No work shall commence without written authorisation.
- Pricing shall be in accordance with the contracted rate schedule.

12. Development team

The following people were involved in the development of this document:

- Patrick Lebambo
- Sive Madikida
- Mokgethi Mokoena

13. Acknowledgements

Not Applicable

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